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ABSTRACT

A project was conducted to analyze followup results from completers of secondary vocational agriculture programs in North Carolina, to develop usable materials, and to train others to use these materials. Key questions were asked concerning the utility of vocational agriculture in the state based on the responses of ex-students to the Secondary Vocational Education Completer/Leaver Followup form. Responses from 225 (9 percent) of the vocational agriculture graduates from 1983 were analyzed. The study found that 70 percent of these program completers were employed full- or part-time. Of those not employed, only 8 percent were actively seeking full-time employment. Thirty-eight percent of the respondents indicated that they were continuing their education, with 12 percent of those attending a four-year university or college. Vocational agriculture was considered useful in preparation for continuing education by 75 percent of the respondents, while 79 percent of the respondents indicated that vocational agriculture provided a high level of usefulness in preparation for work. The role of the vocational agriculture teacher can be significant, since more than half of the graduates indicated they were influenced by their vocational teacher. Students were also pleased with the program they completed. Vocational agriculture completers indicated that "mathematics skills needed for work" and a "general knowledge about a wide range of jobs" were areas in which they wished they had obtained more knowledge. The results of the study were disseminated through a handbook and two workshops. (KC)

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Student Follow-up Study

Final Report

ED267254

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VOCATIONAL AGRICULTURE

Funded under a contract through the Research Coordinating Unit, Division of Vocational Education, Department of Public Instruction, under the auspices of federal law 94-482, FY 1985.

Activities and procedures funded by the Division of Vocational Education are governed by the philosophy of simple fairness to all. Therefore, the policy of the Division is that all operations will be performed without regard to race, sex, color, national origin, or handicap.

ANALYSIS OF FOLLOW-UP RESULTS

FROM COMPLETERS AND LEAVERS OF

SECONDARY VOCATIONAL AGRICULTURE PROGRAMS

FINAL REPORT

Submitted to:

Research Coordinating Unit
Division of Vocational Education
N. C. Department of Public Instruction
Room 524
Education Building
Raleigh, North Carolina 27611

STATE BOARD CONTRACT C - 7817

EXECUTIVE SUMMARY

This document is the final report for contract C - 7817 between the North Carolina State Board of Education, Raleigh, North Carolina and North Carolina State University. The purpose of the contract was to analyze follow-up results from completers of secondary vocational agriculture programs, develop useable materials to train others around the state in the uses of the findings, and to train others in these uses. Key questions were asked concerning the utility of vocational agriculture in the state of North Carolina based on the responses of ex-students to the Secondary Vocational Education Completer/Leaver Follow-up form (VEIS 4). Objectives included:

1. Determine the work status of program completers.
2. Determine the educational status of program completers.
3. Determine the usefulness of vocational agriculture.
4. Determine reasons for selection and satisfaction with vocational agriculture.
5. Determine areas of study for additional emphasis.

Research questions were formulated to examine differences or similarities of responses based on categories of program completers responding to the VEIS 4 follow-up form. These categories included:

1. Course of study (cluster area) pursued by the program completers.
2. Employed vs. Continuing education.

3. Continuing education at a 4-year college vs. Continuing education at a 2-year school.
4. Level II completers vs. Level III completers.

Procedures

A computer tape containing the responses to the VEIS 4 follow-up form for all 1983 vocational program completers was obtained from the Division of Management Information Systems, State Department of Public Instruction. The tape was delivered to the computing center on the campus of North Carolina State University for use through the Triangle University Computing Center (TUCC). The Statistical Package for the Social Sciences (SPSS) was used in tabulating and analyzing the data.

Responses from 225 vocational agriculture program completers in 1983 were analyzed. The respondents were from 57 or fewer local education agencies and represent a very small percentage of the 1983 program completers in vocational agriculture. Data from the Professional Personnel Activity Report (PPAR) indicate that approximately 2,500 persons graduated in 1983 from Level II or III vocational agriculture courses. Thus, the follow-up data represents a 9 percent sample of the population of 1983 vocational agriculture program completers. Because this sample was not drawn randomly nor can be proven to be representative of the population of 1983 vocational agriculture graduates, the findings are limited to a description of the respondents and should not be generalized to all 1983 vocational agriculture program completers.

Major Findings

Seventy percent of the 1983 vocational agriculture program completers were employed full or part-time according to the responses obtained from the VEIS 4 follow-up. Of those not employed only 8 percent were actively seeking full-time employment. These figures compare favorably to the average for all vocational programs of 12 percent and the national youth unemployment rate reported to be 18 percent at the time the survey was taken.

Thirty-eight percent of the respondents indicated they were continuing their education with 12 percent of those attending a University or four year college. Vocational agriculture was considered useful in preparation for continuing education (very good or good response) by 75% of the respondents while 79% of the respondents indicated high usefulness in preparation for work.

The vocational agriculture teacher can be said to play a significant role in influencing students as they further their education since 52 percent of the respondents indicated they were influenced by their vocational teacher. Students were also pleased as to the program they completed with 86 percent responding as very satisfied or satisfied with their vocational agriculture program.

Vocational agriculture completers indicated that "math skills needed for work" was an item they wished they had learned more

about in high school. Fifty-six of the 225 respondents (25%) also stated they wish they had received more of a "general knowledge about a wide range of jobs." The analysis by category of respondents is presented in a later section of this final report.

Training Materials

A handbook was developed as a specific product of this research study. The handbook was developed as a tool for disseminating the research study findings and was divided into three sections. Section I contained information on the structure and format of the VEIS 4 form used to collect the data. Transparency masters of the questions found on the survey form were included in this Section. The summarized data was presented in Section II of the handbook and has also been included in this final report. Data is presented for all program completers as well as for specialized categories of program completers. Job opportunities for agricultural education graduates were summarized in Section III of the handbook.

Training Activities

Two workshops were held in June of 1985 to disseminate the findings of this research study. The officers of the North Carolina Vocational Agriculture Teachers Association received copies of the handbook at a meeting in Raleigh on June 12, 1985. The results of the project and training in the utilization of the findings of this study were given at the workshop meeting. A similar meeting was

held on June 18, 1985 for university and state department personnel. One additional meeting with vocational directors is planned for the future.

The comments from the workshop participants were positive in terms of utilizing the results from the study.

ACKNOWLEDGEMENTS

Several people have worked diligently to make this research study a success. I would like to thank four outstanding North Carolina State University graduate students, Julie Capps, Craig Mayes, Kenny Rogers, and Marie Schroeder, for their contributions in preparing the handbooks and final report. Your assistance has not only insured the success of the project but has made working on this study a pleasurable experience.

Strong support and cooperation in conducting this research study also came from the Agricultural Education staff in the State Department of Public Instruction. A special thanks is due to Mr. Charles Keels, K. C. Beavers, and Doug Powell for their interest and attendance at one of the workshop meetings. Your contributions to the final report were most helpful. I also wish to thank Mr. Clifton Robinson for his assistance in duplicating the data tape for the VEIS 4 program completer data.

A final word of thanks is expressed to Meg Murphy as Director of the Research Coordinating Unit and the Division of Vocational Education, State Department of Public Instruction for funding the research study.

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OBJECTIVES/RESEARCH QUESTIONS

The purpose of this study was to pose and answer key questions concerning the utility of vocational agriculture in the State of North Carolina based on the responses of former students to the Secondary Vocational Education Completer/Leaver Follow-up form (VEIS 4). In order to accomplish the foregoing purpose, the following research questions served as guidelines in the performance of the project:

1. To determine the work status of vocational agriculture students responding to the follow-up form and the relatedness of that status to vocational agriculture.
2. To determine the educational status of vocational agriculture students responding to the follow-up form and the relatedness of that status to vocational agriculture.
3. To determine the usefulness of vocational agriculture for work or education based on the perceptions of vocational agriculture students responding to the follow-up form.
4. To determine the reasons students select vocational agriculture based on the perceptions of vocational agriculture students responding to the follow-up form.
5. To determine the satisfaction of vocational agriculture students with the educational experiences they received in high school including vocational agriculture.
6. To determine areas of study that need additional emphasis based upon responses of vocational agriculture students to the follow-up form.

Research Questions

1. What are the differences or similarities of responses on the VEIS 4 form from vocational agriculture students depending

upon the course of study pursued as a student, (for example, production agriculture, agricultural mechanics, horticulture.)

2. What are the differences or similarities of responses on the VEIS 4 form from vocational agriculture completers that continued their education when compared to those that became employed full or part-time.
3. What are the differences or similarities of responses on the VEIS 4 form from vocational agriculture completers that continued their education at a 4 year college when compared to those that attended a 2 year school.
4. What are the differences or similarities of responses on the VEIS 4 form from vocational agriculture completers finishing a Level II course when compared to those finishing a Level III course.

The findings for each of these objectives and research questions are summarized in the FINDINGS section.

DATA COLLECTION PROCEDURES

The population for this research study was all 1983 vocational agriculture program completers in North Carolina. A completer is defined as a student finishing a Level II or Level III course in one of the five clusters that comprise the vocational agriculture curriculum. The data available for analysis in this study was based on a sample of 57 of the 146 local education agencies in North Carolina. A total of 225 respondents comprised the sample.

Data from the Professional Personnel Activity Reports (PPAR) indicate that approximately 2,500 persons graduated in 1983 from Level II or III vocational agriculture courses. Thus, the follow-up data represents a 9 percent sample of the population of 1983 vocational agriculture program completers. Because this sample was not drawn randomly nor can be proven to be representative of the population of 1983 vocational agriculture graduates, the findings are limited to a description of the respondents and should not be generalized to all 1983 vocational agriculture program completers.

The collection of the data was done by the Division of Vocational Education in June of 1984 through a mailed survey instrument. A sample of the instrument is shown on the following page. Recording of the data on to computer tape for analysis was also done by the Division of Vocational Education prior to the beginning of this research study. Thus, the first procedure in accomplishing the objectives of the study was to obtain the computer tapes with the vocational agriculture data from the Division of Vocational Education, North Carolina State Department of Public Instruction.

NORTH CAROLINA DEPARTMENT OF PUBLIC EDUCATION
SECONDARY VOCATIONAL EDUCATION*
COMPLETER/LEAVER FOLLOW-UP
1982-83 VEIS-4

PLACE STUDENT LABEL
IN THIS SPACE

WE NEED YOUR HELP! WOULD YOU PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT THE VOCATIONAL EDUCATION PROGRAMS YOU TOOK IN HIGH SCHOOL. WE NEED YOUR ANSWERS ABOUT THESE PROGRAMS TO HELP US FIND OUT HOW WE ARE DOING. ALL REPLIES ARE CONFIDENTIAL.

WOULD YOU PLEASE ANSWER THE FOLLOWING QUESTIONS BY CIRCLING THE APPROPRIATE NUMBER(S) TO THE LEFT OF EACH STATEMENT.

*VOCATIONAL EDUCATION IS COMPOSED OF AGRICULTURAL, BUSINESS AND OFFICE, HEALTH OCCUPATIONS, OCCUPATIONAL HOME ECONOMICS, MARKETING AND DISTRIBUTIVE, AND TRADES AND INDUSTRIAL EDUCATION PROGRAMS.

A. PLEASE CIRCLE THE ONE WHICH BEST DESCRIBES YOUR MAIN WORK STATUS AT PRESENT:

1 Employed, full-time (includes self-employment, not enlisted in military service).

2 Employed, part-time (includes self-employment, not enlisted in military service).

3 Enlisted in military service.

4 Not employed, actively seeking part-time employment.

5 Not employed, actively seeking full-time employment.

6 Homemaker

7 Not employed, not seeking employment.

B. IS YOUR MAIN WORK CLOSELY OR DIRECTLY RELATED TO THE VOCATIONAL EDUCATION PROGRAM YOU SELECTED IN HIGH SCHOOL?

1 Yes 2 No

C. CIRCLE ONE ANSWER FOR YOUR MAIN EDUCATION STATUS AT PRESENT:

1 Not in school now.

2 Continue high school.

3 Public community college, technical institute or technical college.

4 Private trade, business or nursing school.

5 Private junior college.

6 University or four year college

D. IS YOUR MAIN EDUCATION STATUS CLOSELY OR DIRECTLY RELATED TO THE VOCATIONAL EDUCATION YOU SELECTED IN HIGH SCHOOL?

1 Yes 2 No

E. PLEASE RATE THE VOCATIONAL EDUCATION TRAINING YOU SELECTED IN HIGH SCHOOL FOR ITS USEFULNESS IN PREPARATION FOR YOUR ONE (A) WORK AND (B) EDUCATION ACTIVITY SHOWN IN 1 AND 3:

WORK		EDUCATION
1	Very good	1
2	Good	2
3	Average	3
4	Poor	4
5	Very Poor	5
6	Does not apply	6

F. CIRCLE THE ONE WHO MOST HELPED YOU BECOME INVOLVED IN YOUR MAIN ACTIVITIES IN YOUR ONE (A) WORK AND (B) EDUCATION ACTIVITY SHOWN IN 1 AND 3:

WORK	WHO	EDUCATION
1	Friend or relative	1
2	Vocational education teacher	2
3	Counselor	3
4	High school job placement service	4
5	Teacher or other school personnel	5
6	Does not apply	6

G. I ENROLLED IN MY VOCATIONAL PROGRAM BECAUSE (CIRCLE THE ONE WHICH BEST APPLIES):

1 The program was related to my career objectives.

2 There was not space in the program I wanted the most.

3 The program I wanted the most was not offered.

4 My parents advised me to be in the program.

5 A friend recommended the program.

6 I was assigned to the program by the school.

PLEASE CONTINUE ON REVERSE SIDE

H. CIRCLE THE STATEMENT WHICH BEST DESCRIBES YOUR FEELING ABOUT YOUR VOCATIONAL EDUCATION EXPERIENCES IN HIGH SCHOOL:

1 Very satisfied

2 Satisfied

3 Neutral

4 Disappointed

5 Very disappointed

I. CIRCLE THE STATEMENT WHCIH BEST DESCRIBES YOUR FEELING ABOUT YOUR EDUCATION EXPERIENCES OTHER THAN VOCATIONAL EDUCATION IN HIGH SCHOOL:

1 Very satisfied

2 Satisfied

3 Neutral

4 Disappointed

5 Very disappointed

J. HOW MANY VOCATIONAL EDUCATION COURSE(S) DID YOU TAKE DURING HIGH SCHOOL WHICH MET: (CIRCLE ALL THAT APPLY)

One hour per day: 1 2 3 4 5 6 7 8 9

Two hours per day: 1 2 3 4 5 6 7 8 9

Three hours per day: 1 2 3 4 5 6 7 8 9

K. WAS VOCATIONAL EDUCATION A MAIN REASON YOU STAYED IN SCHOOL?

1 Yes 2 No

L. CIRCLE ONE OR MORE BELOW FOR THE ITEMS WHICH YOU WISH YOU HAD LEARNED MORE ABOUT IN HIGH SCHOOL:

1 Math skills I need for work.

2 Skills I need for working with my hands.

3 Vocabulary I need for work.

4 Reading skills I need for work.

5 Spelling skills I need for work.

6 Knowledge about job requirements.

7 Skills I need in solving problems in work tasks.

8 Skills in getting along with others at work.

9 Ability to look for a job.

10 Ability to interview for a job.

11 Ability to learn more about my job on my own.

12 General knowledge about a wide range of jobs.

13 Specific skills for my job.

14 Leadership skills.

IF YOU ARE EMPLOYED, PLEASE GO ON TO QUESTION M. IF YOU ARE NOT EMPLOYED, PLEASE RETURN THIS FORM IN THE ENCLOSED POSTPAID ENVELOPE. THANK YOU VERY MUCH.

* *

M. PLEASE ANSWER THIS QUESTION COMPLETELY ONLY IF YOU ARE EMPLOYED.

1. What is your current salary before deductions? (Do not include overtime.)

$ ____ ____.____ ____ ____.____ ____ 1 Per Hour 3 Per Month

2 Per Week 4 Per Year

2. This salary is based on an average of how many hours per week?

____ ____

3. We wish to conduct a study of employers to help us evaluate our vocational programs and to advise us on other programs which are needed. If we may contact your supervisor so he or she can have the opportunity to participate in such a study, please provide the following information. (If self employed, write "SELF", then name).

Supervisor's Last Name First Name Middle Initial

Name of Company or Firm

Company or Firm Mailing Address

City State Zip

N. THANK YOU VERY MUCH FOR YOUR COOPERATION. PLEASE RETURN THIS FORM IN THE ENCLOSED POSTPAID ENVELOPE.

This survey is authorized by PL 94-482 (20 USC 2391).

Recommendations

Based on the input received from participants at the workshops, interviews with the Chief Consultants, and knowledge gained through the conduct of this study, the following recommendations regarding data collection procedures are made:

1. Because of the magnitude of program completers that graduate from vocational education programs each year, it is recommended that the Division of Vocational Education consider the use of random sampling in collecting VEIS-4 data. Tables are available to determine adequate numbers for a sample that would result in valid and reliable data at considerable savings in terms of time and money.

2. In the process of preparing the findings and sharing the results with workshop participants it was discussed that interpretation of the questions found on the VEIS-4 form may influence the results. Therefore, it is recommended that the reliability and validity of the survey instrument be checked and the results made available to persons using the data.

DATA ANALYSIS PROCEDURES

The data for this research study were obtained from the Management Information Systems Division of the State Department of Public Instruction. A blank magnetic tape was purchased and the data was copied on to the tape by Management Information Personnel. The tape was delivered to the Operations office of the North Carolina State University Computing Center for labeling and transfer to the Triangle University Computing Center (TUCC). A program to copy the data from the tape into an active computer file was used so that the data could be accessed through WYLBUR. WYLBUR is a system designed for communicating with the computer. Once the WYLBUR file was created the data was readily available for manipulation.

The VEIS 4 data were tabulated using the FREQUENCIES subprogram of the Statistical Package for the Social Sciences (SPSS). The capability exists in SPSS to select groups for study (categories of respondents) by one or more variables. Thus, it is a relatively simple procedure to sort respondents by program area, course of study completed, present occupational status, etc. The responses to the VEIS 4 questions may then be requested by category of respondents. The FREQUENCIES subprogram tabulates numbers, percents, and makes allowances for missing values. The tables located in the FINDINGS section of this final report were prepared from the printouts of the FREQUENCIES subprogram.

The subprogram CROSSTABS with the Chi-square option was used to determine differences in responses to the questions on the VEIS 4 form based on categories of respondents. Chi-square was selected as the appropriate statistical technique because the assumptions for

parametric tests were violated and the data were primarily nominal in nature. The results of the Chi-square analyses preceed each set of tables in the FINDINGS section of this report.

Recommendations:

1. Parametric tests of inferential statistics are more powerful tests of significance and are usually preferred as methods for making comparisons between groups. It is recommended that sampling measures be used so that parametric tests could be utilized appropriately for analyzing certain questions on the VEIS 4 form.

2. For those responses on the VEIS 4 form that are considered nominal or ordinal data the Chi-square test of significance is recommended for future use. Chi-square is the most appropriate statistical test available given the limitations of the data.

RESEARCH FINDINGS

Tables have been prepared in this section of the final report that show the results of the analysis of data. Answers to the objectives and research questions can be found by surveying the tables. A brief description of the findings for each set of tables preceeds the presentation of the data.

1984 Agricultural Education Follow-up Report

Vo-Ag Completer Data

This data was collected from 1983 Program Completers. Program completers are defined as students finishing a Level II or III course at the time of graduation. Vocational Agriculture is composed of the following Level II or III courses:

Course Number	Course Title
7012	Ag. Production II
7013	Ag. Production III
7032	Ag. Mechanics II
7033	Ag. Mechanics III
7052	Ornamental Horticulture II
7053	Ornamental Horticulture III
7062	Ag. Resources II
7063	Ag. Resources III
7072	Forestry II
7073	Forestry III
7082	Ag. Coop. Training II

Major Findings

Seventy percent of the 1983 vocational agriculture program completers were employed full or part-time according to the responses obtained from the VEIS 4 follow-up. Of those not employed only 8 percent were actively seeking full-time employment. These figures compare favorably to the average for all vocational programs of 12 percent and the national youth unemployment rate reported to be 18 percent at the time the survey was taken.

Thirty-eight percent of the respondents indicated they were continuing their education with 12 percent of those attending a University or four year college. Vocational agriculture was considered useful in preparation for continuing education (very good or good response) by 75% of the respondents while 79% of the respondents indicated high usefulness in preparation for work.

The vocational agriculture teacher can be said to play a significant role in influencing students as they further their education since 52 percent of the respondents indicated they were influenced by their vocational teacher. Students were also pleased as to the program they completed with 86 percent responding as very satisfied or satisfied with their vocational agriculture program.

Vocational agriculture completers indicated that "math skills needed for work" was an item they wished they had learned more about in high school.

Table 1

Work Status of 1983 Vocational Agriculture Program Completers

Work Status	Number	Percent
1. Employed full-time*	112	50
2. Employed part-time*	44	20
3. Enlisted in military service	13	6
4. Not employed, actively seeking part-time employment	16	7
5. Not employed, actively seeking full-time employment	17	8
6. Homemaker	1	0
7. Not employed, not seeking employment	22	10
TOTAL	225	100

* includes self-employment, not enlisted in military service

Table 2

Education Status of 1983 Vocational Agriculture Program Completers

Education Status	Number	Percent
1. Not in school now	133	59
2. Continue high school	7	1
3. Public community college, technical institute, or technical college	47	21
4. Private trade, business, or nursing school	2	1
5. Private junior college	8	4
6. University or four year college	27	12
TOTAL	224	100

Table 3

Relationship of Work and Education Status to High School Vocational Agriculture Program, 1983 Completers

Work Status		
Directly related	Number	Percent
Yes	43	62
No	56	38
TOTAL	99	100

Education Status		
Directly related	Number	Percent
Yes	46	56
No	36	44
TOTAL	76	100

Table 4

Usefulness of High School Vocational Agriculture Training in Preparation for Work and Education, 1983 Completers

Usefulness	Work		Education	
	#	%	#	%
Very good	63	35	61	36
Good	79	44	65	39
Average	30	17	35	21
Poor	5	3	3	2
Very poor	3	1	4	2
TOTAL	180	100	168	100

Table 5

Percent of 1983 Vocational Agriculture Completers Influenced by Selected Individuals in Work and Education Activities

Individuals	Work		Education	
	*	%	*	%
1. Friend or relative	113	66	54	35
2. Vocational education teacher	41	24	80	52
3. Counselor	6	4	14	9
4. High School job placement services	5	3	0	0
5. Other teacher or other school personnel	6	3	7	4
TOTAL	171	100	155	100

Table 6

Student Reasons for Enrolling in Vocational Agriculture, 1983 Completers

Reason	number	percent
1. The program was related to my career objectives	147	68
2. There was not space in the program I wanted the most	7	3
3. The program I wanted most was not offered	7	3
4. My parents advised me to be in the program	7	3
5. A friend recommended the program	36	17
6. I was assigned to the program by the school	11	6
TOTAL	215	100

Table 7

Students' Feelings about their Educational Experience, 1983 Completers

Statement	Vocational Agriculture		Education other than Vo-Ag	
	#	%	#	%
Very satisfied	93	42	49	23
Satisfied	96	44	112	51
Neutral	22	10	44	20
Disappointed	6	3	11	5
Very disappointed	2	1	2	1
TOTAL	219	100	218	100

Table 8

Percent of 1983 Vocational Agriculture Completers Stating that Vocational Education was the Main Reason They Stayed in School

Response	Number	Percent
Yes	65	30
No	149	70
TOTAL	214	100

Table 9

Items Which 1983 Vo-Ag Completers Wish They had Learned more about in High School

Items	Number	Percent*
1. Math skills needed for work	76	34
2. Skills needed for working with hands	52	23
3. Vocabulary needed for work	31	14
4. Reading skills needed for work	24	11
5. Spelling skills needed for work	42	19
6. Knowledge about job requirements	43	19
7. Skills in solving problems in work tasks	34	15

Table 9 (continued)

8. Skills in getting along with others at work	11	5
9. Ability to look for a job	34	15
10. Ability to interview for a job	36	16
11. Ability to learn about job on own	24	11
12. General knowledge about a wide range of jobs	56	25
13. Specific skills for job	33	15
14. Leadership skills	48	21

* percent is calculated based on 225 responses multiple responses possible

1984 Agricultural Education Follow-up Report

Completer Data by Cluster Area

The following clusters in Vocational Agriculture are represented from Level II and III courses only.

Ornamental Horticulture
Agriculture Production
Agriculture Mechanics

Note: There were insufficient numbers of completers in the cluster areas of Agriculture Resources and Forestry to warrant analysis (8 completers, Ag. Resources; 10 completers, Forestry).

Major Observations

Of the three program areas, Ag. Mechanics has a higher percentage of completers that are employed full-time. However, few Ag. Mechanics students continue their education after high school, whereas approximately 48% of the Ag. Production and 31% of the Ornamental Horticulture completers further their education.

About 50% of both Horticulture and Production completers designated that their work and further education was directly related to their vocational agriculture experience. In Ag. Mechanics, 73% indicated that their work was directly related to their vocational agriculture experience, and 68% indicated that their education was related to their vocational agriculture experience. Chi-square analyses revealed a significant difference in responses in this category.

Approximately 70% of the completers stated that the usefulness of their vocational agriculture training was above average for work and education. The Chi-square test indicated a lower preception of usefulness based on responses from Ag. Mechanics completers.

Over 60% of all groups designated that they enrolled in vocational agriculture because the program was related to their career objective. Less than 10% of the students were placed in the program by the school. In all cases, over 80% of the three groups were either satisfied or very satisfied with their vocational education experience. Very few indicated any dissatisfaction.

Finally, approximately one third of the students stayed in school because of vocational education, and according to the statistics, math skills are most needed.

Table 1

Work Status of Vocational Agriculture 1983 Completers

Work Status	Ornamental Horticulture		Agriculture Production		Agriculture Mechanics	
	#	%	#	%	#	%
1. Employed full-time*	32	49	46	46	22	63
2. Employed part-time*	8	12	30	30	4	11
3. Enlisted in military service	6	9	1	1	3	9
4. Not employed, actively seeking part-time employment	3	5	9	9	1	3
5. Not employed, actively seeking full-time employment	6	9	8	8	2	6
6. Homemaker	1	2	0	0	0	0
7. Not employed, not seeking employment	9	14	6	6	3	8
TOTAL	65	100	100	100	35	100

* includes self-employed, not enlisted in military service

Table 2

Education Status of 1983 Vocational Agriculture Completers

Education Status	Ornamental Horticulture		Agriculture Production		Agriculture Mechanics	
	#	%	#	%	#	%
1. Not in school now	44	69	46	46	27	75
2. Continue high school	0	0	6	6	1	3
3. Public community college, technical institute, or technical college	10	15	28	28	4	11
4. Private trade, business, or nursing school	0	0	2	2	0	0
5. Private junior college	1	2	6	6	1	3
6. University or four year college	9	14	12	12	3	8
TOTAL	64	100	100	100	36	100

Table 3

Relationship of Work and Education Status to High School Vocational Agriculture 1983 Completers

Work Status

Directly Related		Ornamental Horticulture		Agriculture Production		Agriculture Mechanics	
		#	%	#	%	#	%
Yes		27	43	55	57	24	73
No		36	57	41	43	9	27
	TOTAL	63	100	96	100	33	100

Education Status

Directly Related		Ornamental Horticulture		Agriculture Production		Agriculture Mechanics	
		#	%	#	%	#	%
Yes		27	44	55	56	23	68
No		34	56	43	44	11	32
	TOTAL	61	100	98	100	34	100

Table 4

Usefulness of High School Vocational Agriculture Training in Preparation for Work and Education, 1983 Completers

Usefulness	Ornamental Horticulture				Agriculture Production				Agriculture Mechanics			
	Work		Education		Work		Education		Work		Education	
	#	%	#	%	#	%	#	%	#	%	#	%
Very Good	14	29	12	28	34	40	33	42	9	31	8	28
Good	25	51	22	51	34	40	25	32	12	41	12	41
Average	8	16	7	16	14	16	17	22	7	24	9	31
Poor	1	2	0	0	3	3	2	2	1	4	0	0
Very Poor	1	2	2	5	1	1	2	2	0	0	0	0
TOTAL	49	100	43	100	86	100	79	100	29	100	29	100

Table 5

Percent of 1983 Vocational Agriculture Completers Influenced by Selected Individuals in Work and Education Activities

Individuals	Ornamental Horticulture				Agriculture Production				Agriculture Mechanics			
	Work		Education		Work		Education		Work		Education	
	#	%	#	%	#	%	#	%	#	%	#	%
1. Friend or relative	33	62	16	39	51	67	28	38	21	78	6	24
2. Vocational education teacher	16	30	20	49	15	20	36	49	4	15	17	68
3. Counselor	0	0	4	10	4	5	7	9	2	7	1	4
4. High School job placement services	2	4	0	0	3	4	0	0	0	0	0	0
5. Other teacher or other school pesonnel	2	4	1	2	3	4	3	4	0	0	1	4
TOTAL	53	100	41	100	76	100	74	100	27	100	25	100

Table 6

Student Reasons for Enrolling in Vocational Agriculture, 1983 Completers

Reason	Ornamental Horticulture		Agriculture Production		Agriculture Mechanics	
	#	%	#	%	#	%
1. The program was related to my career objectives	39	64	69	70	22	63
2. There was not space in the program I wanted the most	0	0	3	4	3	8
3. The program I wanted most was not offered	3	5	2	2	2	6
4. My parents advised me to be in the program	4	6	2	2	1	3
5. A friend recommended the program	14	23	16	16	4	11
6. I was assigned to the program by the school	1	2	6	6	3	9
TOTAL	61	100	98	100	35	100

Table 7

Student's Feelings About Their Vocational Education Experience, 1983 Compieters

Statement	Ornamental Horticulture		Agriculture Production		Agriculture Mechanics	
	#	%	#	%	#	%
Very Satisfied	29	46	41	42	13	37
Satisfied	27	43	41	42	17	49
Neutral	6	10	9	9	5	14
Disappointed	1	1	5	5	0	0
Very Disappointed	0	0	2	2	0	0
TOTAL	201	100	325	100	116	100

Table 8

Students' Feelings about Their Education other than Vocational Education, 1983 Completers

Statement	Ornamental Horticulture		Agriculture Production		Agriculture Mechanics	
	#	%	#	%	#	%
Very Satisfied	23	36	19	19	2	6
Satisfied	27	43	51	52	21	60
Neutral	11	18	19	19	11	31
Disappointed	2	3	7	8	1	3
Very Disappointed	0	0	2	2	0	0
TOTAL	63	100	98	100	35	100

Table 9

Percent of 1983 Vocational Agriculture Completers stating that Vocational Education was the Main Reason They Stayed in School

Response	Ornamental Horticulture		Agriculture Production		Agriculture Mechanics	
	#	%	#	%	#	%
YES	20	32	27	28	12	35
NO	42	68	69	72	22	65
TOTAL	62	100	96	100	34	100

Table 10

Items Which 1983 Vocational Completers Wish They had Learned more about in High School

Items	Ornamental Horticulture		Agriculture Production		Agriculture Mechanics	
	#	%*	#	%*	#	%*
1. Math skills needed for work	18	28	35	34	14	39
2. Skills needed for working with hands	14	22	23	23	8	22
3. Vocabulary needed for work	8	12	16	16	4	11
4. Reading skills needed for work	5	8	15	15	2	6
5. Spelling skills needed for work	11	17	25	25	3	8
6. Knowledge about job requirements	17	26	19	19	5	14
7. Skills in solving problems in work tasks	18	28	9	9	5	14

Table 10 (continued)

8. Skills in getting along with others at work	2	3	5	5	1	3
9. Ability to look for a job	11	17	21	21	0	0
10. Ability to interview for a job	8	12	21	21	3	8
11. Ability to learn about job on own	6	9	12	12	3	8
12. General knowledge about a wide range of jobs	13	20	28	27	9	25
13. Specific skills for job	9	14	17	17	4	11
14. Leadership skills	8	12	29	28	9	25

* percent is calculated based on 65 responses for Ornamental Horticulture; 102 responses for Agriculture Production; and 36 responses for Agriculture Mechanics; multiple responses possible.

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Completer Data by Work and Education Status

Data is based on all Level II and III completers from Agriculture Production, Agriculture Mechanics, Ornamental Horticulture, Agriculture Resources, and Forestry.

Major Observations

Of the completers, 70% are employed full-time, with the remaining 30% employed part-time and 40% of the completers continuing their education are employed part-time. Over half of the completers continuing their education are attending a public community college, technical institute, or technical college.

Over 70% of both employed and continuing education students enrolled in vocational agriculture because the program was related to their career objectives. Furthermore, approximately 85% of both the employed and continuing education completers were satisfied or very satisfied with their vocational agriculture experience.

Vocational agriculture is the main reason that approximately one third of the program completers stayed in school and math skills were the most desired item by vocational agriculture program completers, especially by those continuing their education.

Table 1

Work Status of Vocational Agriculture 1983 Completers

Work Status	Employed		Continuing Education	
	#	%	#	%
1. Employed full-time*	107	70	13	16
2. Employed part-time*	43	30	33	40
3. Enlisted in military service			3	4
4. Not employed, actively seeking part-time employment			10	12
5. Not employed, actively seeking full-time employment			4	5
6. Homemaker			0	0
7. Not employed, not seeking employment	—	—	19	23
TOTAL	150	100	82	100

* includes self-employed, not enlisted in military service

Table 2

Education Status of 1983 Vocational Agriculture Completers

Education Status	Employed		Continuing Education	
	#	%	#	%
1. Not in school now	101	68	0	0
2. Continue high school	2	1	0	0
3. Public community college, technical institute, or technical college	30	20	46	55
4. Private trade, business, or nursing school	0	0	2	2
5. Private junior college	5	3	8	10
6. University or four year college	11	8	27	33
TOTAL	141	100	83	100

Table 3

Relationship of Work and Education Status to High School Vocational Agriculture 1983 Completers

Work Status

Directly Related	Employed		Continuing Education	
	#	%	#	%
Yes	43	62	36	48
No	56	38	39	52
TOTAL	149	100	75	100

Education Status

Directly Related	Employed		Continuing Education	
	#	%	#	%
Yes	82	58	46	56
No	60	42	36	44
TOTAL	142	100	76	100

Table 4

Usefulness of High School Vocational Agriculture Training in Preparation for Work and Education, 1983 Completers

Usefulness	Employed				Continuing Education			
	Work		Education		Work		Education	
	#	%	#	%	#	%	#	%
Very Good	48	37	36	33	19	32	22	32
Good	55	42	43	40	30	50	31	44
Average	21	16	25	23	8	13	14	20
Poor	4	3	2	1	2	3	2	2
Very Poor	2	2	4	3	1	2	2	2
TOTAL	130	100	110	100	100	100	71	100

Table 5

Percent of 1983 Vocational Agriculture Completers Influenced by Selected Individuals in Work and Education Activities

Individuals	Employed				Continuing Education			
	Work		Education		Work		Education	
	#	%	#	%	#	%	#	%
1. Friend or relative	19	75	38	36	38	72	24	36
2. Vocational education teacher	25	20	57	55	9	17	28	42
3. Counselor	4	2	8	8	2	4	8	12
4. High School job placement services	2	1	0	0	1	2	0	0
5. Other teacher or other school pesonnel	4	2	1	1	3	5	7	10
TOTAL	126	100	104	100	53	100	67	100

Table 6

Student Reasons for Enrolling in Vocational Agriculture, 1983 Completers

Reason	Employed		Continuing Education	
	#	%	#	%
1. The program was related to my career objectives	106	74	56	70
2. There was not space in the program I wanted the most	3	2	2	2
3. The program I wanted most was not offered	2	1	1	1
4. My parents advised me to be in the program	3	1	3	4
5. A friend recommended the program	23	16	15	19
6. I was assigned to the program by the school	7	5	3	4
TOTAL	144	100	80	100

Student's Feelings About Their Vocational Education Experience, 1983 Completers

Statement	Employed		Continuing Education	
	#	%	#	%
Very Satisfied	65	44	31	39
Satisfied	62	42	38	46
Neutral	14	10	8	10
Disappointed	4	3	5	6
Very Disappointed	2	1	1	1
TOTAL	147	100	83	100

Table 8

Students' Feelings about Their Education other than Vocational Education, 1983 Completers

Statement	Employed		Continuing Education	
	#	%	#	%
Very Satisfied	29	20	20	24
Satisfied	76	52	38	46
Neutral	36	25	17	21
Disappointed	5	3	7	8
Very Disappointed	1	0	1	1
TOTAL	147	100	83	100

Table 9

Percent of 1983 Vocational Agriculture Completers stating that Vocational Education was the Main Reason They Stayed in School

Response	Employed		Continuing Education	
	#	%	#	%
YES	47	32	19	23
NO	98	68	63	77
TOTAL	145	100	82	100

Table 10

Items Which 1983 Vocational Completers Wish They had Learned more about in High School

Items	Employed		Continuing Education	
	#	%*	#	%*
1. Math skills needed for work	48	33	36	43
2. Skills needed for working with hands	36	24	14	17
3. Vocabulary needed for work	20	14	12	14
4. Reading skills needed for work	16	11	11	13
5. Spelling skills needed for work	30	20	18	22
6. Knowledge about job requirements	27	18	13	16
7. Skills in solving problems in work tasks	21	14	11	13

Table 10 (continued)

8. Skills in getting along with others at work	8	5	2	2
9. Ability to look for a job	24	16	14	17
10. Ability to interview for a job	20	14	20	24
11. Ability to learn about job on own	18	12	8	10
12. General knowledge about a wide range of jobs	36	24	24	29
13. Specific skills for job	21	14	11	13
14. Leadership skills	32	22	20	24

* percent is calculated based on 147 responses for completers employed and 83 responses for completers continuing their education.

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Completer Data by Type of Continuing Education

Vocational Agriculture completers attending a University or four year college are compared with completers attending a public community college, technical institute or technical college, private trade, business or nursing school, or private junior college.

Major Observations

Approximately 60% of the students who are attending a 2 year school are also employed (full or part-time) while approximately 40% of the students who are attending a 4 year college are also employed (full or part-time).

Of the 1983 program completers who are attending a 4 year college, a majority said their work and their schooling are directly related to agriculture. Over 70% of the program completers said the high school vocational program was very useful (good and very good) to their present work and/or educational situation.

More than 60% of the students now furthering their education said they enrolled in vocational agriculture because the program was related to their career objectives and more than 70% of the students now furthering their education were satisfied or very satisfied with their vocational education
experiences.

Of the 1983 program completers now attending college (2 or 4 year) more than 40% said they wished they had learned more math skills and more than 20% wished they had learned more spelling skills.

Table 1

Work Status of Vocational Agriculture 1983 Completers

Work Status	Attending 4 Year College		Attending 2 Year School	
	#	%	#	%
1. Employed full-time*	1	4	12	21
2. Employed part-time*	10	38	23	41
3. Enlisted in military service			3	5
4. Not employed, actively seeking part-time employment	4	15	6	11
5. Not employed, actively seeking full-time employment			4	7
6. Homemaker			0	0
7. Not employed, not seeking employment	11	43	8	15
TOTAL	26	100	56	100

* includes self-employed, not enlisted in military service

Table 2

Education Status of 1983 Vocational Agriculture Completers

Education Status	Attending 4 Year College		Attending 2 Year School	
	#	%	#	%
1. Not in school now				
2. Continue high school				
3. Public community college, technical institute, or technical college			46	82
4. Private trade, business, or nursing school			2	4
5. Private junior college			8	14
6. University or four year college	27	100	0	0
TOTAL	27	100	56	100

Table 3

Relationship of Work and Education Status to High School Vocational Agriculture 1983 Completers

Work Status

Directly Related	Attending 4 Year College		Attending 2 Year School	
	#	%	#	%
Yes	12	55	24	45
No	10	45	29	55
TOTAL	22	100	53	100

Education Status

Directly Related	Attending 4 Year College		Attending 2 Year School	
	#	%	#	%
Yes	22	82	24	44
No	5	18	31	56
TOTAL	27	100	55	100

Table 4

Usefulness of High School Vocational Agriculture Training in Preparation for Work and Education, 1983 Completers

Usefulness	Attending 4 Year College				Attending 2 Year School			
	Work		Education		Work		Education	
	#	%	#	%	#	%	#	%
Very Good	7	33	13	52	12	31	9	20
Good	10	48	7	28	20	51	24	52
Average	3	14	4	16	5	12	10	22
Poor	1	5	1	4	1	3	1	2
Very Poor	0	0	0	0	1	3	2	4
TOTAL	21	100	25	100	39	100	46	100

Table 5

Percent of 1983 Vocational Agriculture Completers Influenced by Selected Individuals in Work and Education Activities

Individuals	Attending 4 Year College				Attending 2 Year School			
	Work		Education		Work		Education	
	#	%	#	%	#	%	#	%
1. Friend or relative	11	73	10	42	27	71	14	33
2. Vocational education teacher	4	27	11	46	5	13	17	40
3. Counselor	0	0	0	0	2	5	8	19
4. High School job placement services	0	0	0	0	1	3	0	0
5. Other teacher or other school personnel	0	0	3	12	3	8	4	8
TOTAL	15	100	24	100	38	100	43	100

Table 6

Student Reasons for Enrolling in Vocational Agriculture, 1983 Completers

Reason	Attending 4 Year College		Attending 2 Year School	
	#	%	#	%
1. The program was related to my career objectives	17	63	39	74
2. There was not space in the program I wanted the most	1	4	1	2
3. The program I wanted most was not offered	1	4	0	0
4. My parents advised me to be in the program	2	7	1	2
5. A friend recommended the program	5	18	10	19
6. I was assigned to the program by the school	1	4	2	3
TOTAL	27	100	53	100

Student's Feelings About Their Vocational Education Experience, 1983 Completers

Statement	Attending 4 Year College		Attending 2 Year School	
	#	%	#	%
Very Satisfied	13	48	18	32
Satisfied	12	44	26	46
Neutral	0	0	8	14
Disappointed	2	8	3	6
Very Disappointed	0	0	1	2
TOTAL	27	100	56	100

Table 8

Students' Feelings about Their Education other than Vocational Education, 1983 Completers

Statement	Attending 4 Year College		Attending 2 Year School	
	#	%	#	%
Very Satisfied	7	26	13	23
Satisfied	11	41	27	48
Neutral	5	18	12	22
Disappointed	4	15	3	5
Very Disappointed	0	0	1	2
TOTAL	27	100	56	100

Table 9

Percent of 1983 Vocational Agriculture Completers stating that Vocational Education was the Main Reason They Stayed in School

Response	Attending 4 Year College		Attending 2 Year School	
	#	%	#	%
YES	7	26	12	22
NO	20	74	43	78
TOTAL	27	100	55	100

Items Which 1983 Vocational Completers Wish They had Learned more about in High School

Items	Attending 4 Year College		Attending 2 Year School	
	#	%*	#	%*
1. Math skills needed for work	12	44	24	43
2. Skills needed for working with hands	6	22	8	14
3. Vocabulary needed for work	5	19	7	13
4. Reading skills needed for work	4	15	7	13
5. Spelling skills needed for work	6	22	12	21
6. Knowledge about job requirements	3	11	10	18
7. Skills in solving problems in work tasks	5	19	6	11

Table 10 (continued)

8. Skills in getting along with others at work	0	0	2	4
9. Ability to look for a job	5	19	9	16
10. Ability to interview for a job	8	30	12	21
11. Ability to learn about job on own	2	7	6	11
12. General knowledge about a wide range of jobs	10	37	14	25
13. Specific skills for job	4	15	7	13
14. Leadership skills	5	19	15	27

* percent is calculated based on 27 responses for completers attending a University or four year college and 56 completers attending a public community college, technical institute, or technical college, private trade, business or nursing school or private junior college.

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Completer Data by Course Level Completed

Students completing Level II courses in Vocational Agriculture are compared with Level III completers.

Major Observations

Of the Level II and Level III completers over 68% of the completers are employed full-time or part-time. Chi-square analysis showed no significant differences in responses from Level II and III completers with respect to work status.

Over 65% of the Level II and Level III completers stated that a friend or relative influenced them to pursue their work activities, while over 44% of the Level II and Level III completers stated that their vocational agriculture teacher influenced them in their education.

Over 65% of the Level II and Level III completers stated that the reason they enrolled in vocational agriculture was because the program was related to their career objectives.

Whereas, over 41% of the Level II and Level III completers stated that they were very satisfied with their vocational education experience.

Use of the Chi-square revealed no other significant differences between the two groups.

Table 1

Work Status of Vocational Agriculture 1983 Completers

Work Status	Level II		Level III	
	#	%	#	%
1. Employed full-time*	61	51	46	47
2. Employed part-time*	20	17	23	23
3. Enlisted in military service	5	4	8	8
4. Not employed, actively seeking part-time employment	9	8	6	6
5. Not employed, actively seeking full-time employment	11	9	6	6
6. Homemaker	1	1	0	0
7. Not employed, not seeking employment	12	10	10	10
TOTAL	119	100	99	100

* includes self-employed, not enlisted in military service

Table 2

Education Status of 1983 Vocational Agriculture Completers

Education Status	Level II		Level III	
	#	%	#	%
1. Not in school now	74	63	53	53
2. Continue high school	1	1	6	6
3. Public community college, technical institute, or technical college	22	19	24	24
4. Private trade, business, or nursing school	2	2	5	5
5. Private junior college	3	3	0	0
6. University or four year college	15	12	12	12
TOTAL	117	100	100	100

Table 3

Relationship of Work and Education Status to High School Vocational Agriculture 1983 Completers

Work Status

Directly Related	Level II		Level III	
	#	%	#	%
Yes	62	56	49	51
No	47	44	47	49
TOTAL	109	100	100	100

Education Status

Directly Related	Level II		Level III	
	#	%	#	%
Yes	59	54	51	52
No	50	46	47	48
TOTAL	109	100	98	100

Table 4

Usefulness of High School Vocational Agriculture Training in Preparation for Work and Education, 1983 Completers

Usefulness	Level II				Level III			
	Work		Education		Work		Education	
	#	%	#	%	#	%	#	%
Very Good	31	34	25	31	27	33	32	39
Good	46	51	33	41	32	39	31	38
Average	11	13	19	24	19	22	15	18
Poor	1	1	2	3	4	5	1	1
Very Poor	1	1	1	1	1	1	3	4
TOTAL	90	100	80	100	83	100	82	100

Table 5

Percent of 1983 Vocational Agriculture Completers Influenced by Selected Individuals in Work and Education Activities

Individuals	Level II				Level III			
	Work		Education		Work		Education	
	#	%	#	%	#	%	#	%
1. Friend or relative	55	65	22	29	56	70	31	41
2. Vocational education teacher	24	29	44	58	13	16	33	44
3. Counselor	2	2	7	9	4	5	7	9
4. High School job placement services	2	2	0	0	3	4	0	0
5. Other teacher or other school personnel	1	2	3	4	5	5	4	6
TOTAL	84	100	76	100	81	100	75	100

Table 6

Student Reasons for Enrolling in Vocational Agriculture, 1983 Completers

Reason	Level II		Level III	
	#	%	#	%
1. The program was related to my career objectives	80	71	62	65
2. There was not space in the program I wanted the most	5	4	2	2
3. The program I wanted most was not offered	4	4	3	3
4. My parents advised me to be in the program	1	1	6	6
5. A friend recommended the program	17	15	17	18
6. I was assigned to the program by the school	5	5	6	6
TOTAL	112	100	96	100

Table 7

Student's Feelings About Their Vocational Education Experience, 1983 Completers

Statement	Level II		Level III	
	#	%	#	%
Very Satisfied	47	41	43	44
Satisfied	51	44	42	43
Neutral	15	13	7	7
Disappointed	2	2	4	4
Very Disappointed	0	0	2	2
TOTAL	115	100	98	100

Table 8

Students' Feelings about Their Education other than Vocational Education, 1983 Completers

Statement	Level II		Level III	
	#	%	#	%
Very Satisfied	21	18	26	27
Satisfied	66	57	43	44
Neutral	23	20	21	21
Disappointed	4	4	7	7
Very Disappointed	1	1	1	1
TOTAL	115	100	98	100

Table 9

Percent of 1983 Vocational Agriculture Completers stating that Vocational Education was the Main Reason They Stayed in School

Response	Level II		Level III	
	#	%	#	%
YES	38	34	25	26
NO	75	66	70	74
TOTAL	113	100	95	100

Table 10

Items Which 1983 Vocational Completers Wish They had Learned more about in High School

Items	Level II		Level III	
	#	%*	#	%*
1. Math skills needed for work	37	31	35	35
2. Skills needed for working with hands	25	21	25	25
3. Vocabulary needed for work	15	13	14	14
4. Reading skills needed for work	7	6	15	15
5. Spelling skills needed for work	18	15	21	21
6. Knowledge about job requirements	24	20	18	18
7. Skills in solving problems in work tasks	14	12	19	19

Table 10 (continued)

8. Skills in getting along with others at work	4	3	5	5
9. Ability to look for a job	19	16	14	14
10. Ability to interview for a job	17	14	18	18
11. Ability to learn about job on own	11	9	12	12
12. General knowledge about a wide range of jobs	27	23	26	26
13. Specific skills for job	17	14	15	15
14. Leadership skills	23	19	24	24

* percent is calculated based on 119 responses for Level II completers and 100 responses for Level III completers

HANDBOOK PREPARATION

One product of this research study was a handbook containing the findings of the data analyses. Fifty copies of the handbook were produced. Twenty-five copies were used in the workshops with vocational agriculture teachers, vocational directors, and university/state staff. The other twenty-five copies accompany this final report for distribution by the state department.

The handbook is divided into three sections. The methods used in collecting the data are explained in Section I. A copy of the instrument sent to program graduates by the Division of Vocational Education is included along with a listing of the schools that comprise the sample of 1983 program graduates responding to the VEIS 4 form. Responses were analyzed from 57 local education agencies in North Carolina.

The results of an analysis of the responses from vocational agriculture graduates is found in Section II of the handbook. A total of 225 program completers responded to the VEIS 4 survey. In this case a program completer is defined as a student graduating from a Level II or Level III course in one of the five clusters, Agricultural Production, Agricultural Mechanics, Ornamental Horticulture, Agricultural Resources, or Forestry. Tables showing the responses of all students completing the VEIS 4 form in 1984 are also included in this section. The total number of respondents equals 402 and

includes students enrolled in Level I courses and the Introduction to Agriculture/Natural Resources course.

Section III contains a list of career opportunities for students interested in agriculture. The list is primarily composed of occupations that require education beyond the high school level and was abstracted from a Careers and Curriculum brochure from the School of Agriculture and Life Sciences, North Carolina State University.

DISSEMINATION OF FINDINGS

Vocational Agriculture Teachers Workshop

Two workshops were held in June to disseminate the findings from this research project. One workshop was held for the officers of the North Carolina Vocational Agriculture Teachers Association during the State FFA Convention. A copy of the handbook was given to each workshop participant. The vocational agriculture teachers were presented the findings of the study and discussed implications of the results.

At the beginning of the workshop it was discovered that teachers have had varying amounts of contact with the VEIS follow-up. Some teachers have helped in collection of the data whereas other teachers were not aware of the contents of the VEIS 4 follow-up form. All participants were aware that a follow-up of graduates was being conducted on an annual basis.

The teachers attending the workshop were made aware of the importance of the follow-up system. Reasons for becoming familiar with the system which were discussed by the group included:

1. Student follow-up data can be used in developing and revising the Vocational Improvement Plan.

2. Student follow-up data is an important data source used by teachers in the new Program Review Process (Program Area Improvement and Task Force).

3. Student follow-up data is important for annual program evaluation by each vocational agriculture teacher.

4. The findings from student follow-up data show accountability for vocational programs.

The results of the follow-up study were then presented and discussed by the participants. The teachers did not perceive the data to be inaccurate based on knowledge of their local programs, but cautioned against making broad conclusions about the utility of vocational agriculture from the findings of the study. Of particular concern to the participants was the question about relatedness of training to work or education status. The teachers believed "usefulness of the program" is a better measure of program effectiveness than is "relatedness of the program."

At the conclusion of the workshop the teachers were asked to share the findings of the study and the content of the handbook with other teachers in their districts.

University and State Staff Workshop

The workshop for Agricultural Education staff at North Carolina State University and North Carolina A & T State University as well as the State Consultants for Agricultural Education was held on June 18, 1985 in Poe Hall on the NCSU Campus. The format of the workshop was similar to the one held for the vocational agriculture teachers. Each workshop participant received a copy of the handbook. At this workshop considerable discussion occurred as to the appropriateness, validity, and reliability of the questions on the VEIS 4 form. The recommendation made earlier in this final report to examine the

validity and reliability of the VEIS 4 instrument comes from the input received at this workshop. It was strongly suggested that any conclusions based on the findings be drawn relative to the sample of 225 respondents, not to vocational agriculture program completers as a whole. A discussion of the results found in the tables was held and university staff members were asked to share the findings in undergraduate and graduate courses. The state staff members indicated the handbook would be most helpful in interpreting the data from the VEIS 4 follow-up.

A third workshop was originally planned for a select group of vocational directors. However, the workshop had to be canceled due to other committments of the directors during the third week in June. The workshop will be rescheduled for later in the fall of 1985.

CONCLUSIONS AND RECOMMENDATIONS

Based on the knowledge gained through conducting this study, the following conclusions and recommendations are offered in addition to those previously mentioned.

1. Because vocational agriculture teachers are mostly unfamiliar with the VEIS 4 follow-up, it is recommended that an explanation of the system for collecting the data be done at a fall or spring inservice meeting.

2. Because of the relative ease of manipulating the data using the Statistical Package for the Social Sciences (SPSS), it is recommended that the Division of Vocational Education investigate the use of this statistical package for analyzing the data in addition to Easytrieve.

3. Because the format of the tables in this final report was easily understood and well received by workshop participants, it is recommended that the Division consider reformating state follow-up reports or generate reports from a Macintosh computer as was done in this study.

4. Because the sample of 225 respondents represents less than 10% of the 1983 program completers in vocational agriculture, it is recommended that a percentage of non-respondents be contacted to see if non-respondent bias exists. It is further

recommended that even if the return rate is improved in future years a sample of non-respondents be contacted to determine if bias exists.

5. Because low numbers of responses prevented analysis of two clusters of courses (Ag. Resources and Forestry), it is recommended that sampling techniques be used and a follow-up of non-respondents be done to insure adequate numbers of responses.